

Appl. No. 10/086,795  
Art Unit 2851  
Amdt. dated 04/28/05

## **II. REMARKS/ARGUMENTS**

These Remarks are in response to the Office Action mailed March 4, 2005. No fee is due for the addition of any new claims.

Claims 1-23 were pending in the Application prior to the outstanding Office Action. The Office Action rejected claims 1-23. The present reply responds to the rejections, leaving for the Examiner's present consideration claims 1-23. Reconsideration of the claims and issuance of a Notice of Allowance is respectfully requested.

### **1. Rejections Under 35 U.S.C. §102(b)**

The Examiner rejected claims 1-7, 18, 19 and 22-24 under 35 USC §102(b) as being anticipated by United States Patent No. 6,067,126 (hereafter, "*Alexander*"). Examiner makes reference to the Office Action dated February 25, 2004, which states that *Alexander* discloses a method and apparatus for editing a video recording with audio selections, including receiving an audio and video signal, detecting transition points in the audio and video signals, aligning the audio and video signals in time, editing the aligned video signal and merging the aligned video signal with the audio signal (col. 3, lines 1-19). Applicants respectfully traverse the rejections under §102(b). Applicants respectfully note that contrary to the suggestion of the Office Action that Applicant's reply dated December 20, 2004 repeated the arguments of the response dated April 28, 2004, in fact Applicant's reply dated December 20, 2004 included numerous arguments that had not previously appeared in any prior submitted document in this matter. These arguments demonstrate why *Alexander* makes no disclosure teaching the current claims and therefore, why the current claims are allowable.

*Alexander* discloses an apparatus and method for adding an audio track to a video recording. *Alexander* discloses that an A/V editing system may load an entire video recording for analysis (col. 4, lines 57-60), may load a subset of the entire video recording for analysis (col. 4, lines 64-66), may load a two to three minute segment of video for analysis (col. 4, line 66 – col. 5, line 4), or may load individual scenes of video (col. 5, lines 4-6) for analysis. Following loading of the "predetermined amount" (col. 5, lines 11-15) of video, the video stream is then divided into quadrants or regions

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within each frame (Fig. 4) and is analyzed in each region for color, lighting, content and motion attributes (col. 5, lines 43-67). Thus, the length of the video is determined before the video is analyzed; unlike the current claims, *Alexander* does not truncate an aligned video signal. An audio stream within the video, if any, is then identified as either speech, music, or other (col. 6, lines 16-65). The level of the audio within the video is configured accordingly. A separate audio track is then added to the video. The audio is selected based on the detected attributes, such as whether the video content colors are "cool" or "hot" colors (col. 7, lines 35-45). Once selected, the audio track is added to the video, and the video's previous audio track level is adjusted so as not to be smothered.

Unlike *Alexander*, the present invention discloses editing the aligned video signal in addition to merging the aligned video signal. Thus, the claimed invention aligns the video signal and audio signal before editing the video signal. By contrast, *Alexander* discloses receiving video in predetermined lengths according to the average audio file length or by individual scenes (col. 5, lines 1-10) followed by analyzing the video. *Alexander* does not disclose making or adjusting any edits to an aligned video signal. *Alexander* only augments predetermined lengths of video by adding an audio track. Unlike *Alexander*, according to the current claims, the video signal and audio signal are aligned, after which the two signals are merged.

Applicants respectfully note that the Office Action is incorrect when stating (at p. 4, 1<sup>st</sup> para.) that "transition points are necessarily detected to form segments" in *Alexander*. *Alexander* states that "predetermined" amounts of video (col. 4, lines 57-60; col. 5, lines 11-15) are utilized. In an alternative embodiment, "a subset of the entire video recording" (col. 4, lines 64-66) is used, not necessarily at transition points. Other than a scene identification function mentioned in one embodiment (col. 5, lines 6-11), nowhere does *Alexander* teach how to locate segments that are not predefined. In contrast, the current claims automatically segment audio and video. The current claims do not rely on "predetermined" audio and video segments, as does *Alexander*. The current claims teach specific methods of computing and detecting transition points automatically.

In contrast to the claimed invention, *Alexander's* system will fail if the "predetermined" video amounts are not homogeneous -- if the color or audio content changes substantially in the predetermined video, the automatic content detection described in *Alexander* will fail. For example,

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if the predetermined A/V signal includes audio that changes from speech to music, it is unclear what will be the output of *Alexander's* audio analysis module (208). The current claims describe an invention that, unlike *Alexander*, will reliably identify segment boundaries.

The February 28, 2004 Office Action states that *Alexander* discloses truncating a video signal. As discussed above, an A/V editing system may load predetermined portions of a video recording. However, only after loading the predetermined portions is the video recording segment analyzed and augmented with an audio signal. Therefore, *Alexander* does not disclose editing an "aligned" video signal.

The February 28, 2004 Office Action further states that *Alexander* discloses that a video signal is augmented by adding an audio track, and that this satisfies the "editing" element of claim 1. Applicants respectfully disagree with this interpretation of *Alexander*.

In conclusion regarding the rejection under 35 USC §102(b), claim 1 recites "editing the aligned video signal" thereby distinguishing the claimed invention from *Alexander*. Claims 1-7, 18-19, and 22-23, as amended, all directly or indirectly depend from independent claim 1, and are therefore believed patentable for at least the same reasons as the independent claims and because of the additional limitations of these claims. Therefore, Applicants respectfully submit that claims 1-7, 18-19 and 22-23 are patentable over *Alexander* and Applicants have overcome the rejection based on *Alexander et al.*

## **2. Rejections Under 35 U.S.C. §103(a)**

The Examiner rejected claims 1-7, 18-20, 22 and 23 under 35 U.S.C. §102(b) as being anticipated by *Alexander* or, in the alternative, under 35 U.S.C. §103(a) as being obvious over *Alexander* in view of Hu, et al. (U.S. 2002/0191107; hereafter, "Hu"). The rejection based on 35 U.S.C. §102(b) is respectfully responded to above by Applicant. Claims 8-17 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Alexander* in view of either "Automatic Audio Segmentation Using a Measure of Audio Novelty" by Foote (hereafter, "Foote") or "Scene Boundary Detection via Video Self-Similarity Analysis" by Cooper et al. (hereafter, "Cooper"). The Office Action states that *Alexander* discloses all that is claimed except for the features explicitly recited in

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the above referenced claims. Applicants respectfully traverse the rejections under 35 USC §§102(b) and 103(a).

The rejections based on 35 U.S.C. §102(b) are respectfully responded to above by Applicant. Regarding the rejections based on 35 U.S.C. §103(a), unlike *Alexander*, the present claims disclose editing the aligned video signal in addition to merging the aligned video signal. Thus, the claims disclose aligning the video signal and audio signal before editing the video signal. By contrast, *Alexander* discloses receiving video in predetermined lengths according to the average audio file length or by individual scenes (col. 5, lines 1-10) followed by analyzing the video. *Alexander* does not disclose making any edits to an aligned video. *Alexander* only discloses augmenting a video by adding an audio track.

Hu discloses a digital signal processing technique invention for synchronizing an audio encoding process with a video synchronization signal. No disclosures appear in Hu relating to editing and automatically producing an aligned music video. Additionally, Foote and Cooper relate to analysis of video signals, and do not disclose editing an aligned music video. Thus, neither *Alexander*, Hu, Foote nor Cooper, considered singly or in combination, disclose editing an aligned video as recited in claim 1.

The Office Action further suggests (p. 5, para. 4) that "the ordinary artisan would have been motivated to modify *Alexander* in the manner described above." The stated motivation is that "the resultant audio and video signals are of equal length in order to precisely synchronize audio and video data." Applicants respectfully note that the Office Action thereby engages in impermissible hindsight construction. Applicants respectfully further note that such general observations regarding benefits of the invention demonstrate the novelty and patentability of the current claims while failing to offer any a priori motivation to modify *Alexander* as suggested, let alone for a method for automatically producing a music video, comprising: receiving an audio signal; receiving a video signal; detecting transition points in the audio signal and the video signal; aligning in time the video signal with the audio signal; editing the aligned video signal; and merging the aligned video signal with the audio signal to form a music video signal.

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Claims 2-23, as amended, all directly or indirectly depend from independent claim 1, and are therefore believed patentable for at least the same reasons as the independent claims and because of the additional limitations of these claims. Therefore, Applicants respectfully submit that claims 2-23 and 21 are patentable over *Alexander* in view of Hu, Foote and Cooper and Applicants have overcome the rejections based on *Alexander*, Hu, Foote and Cooper, considered singly or in combination.

### III. CONCLUSION

In light of the above, it is respectfully submitted that amended claims 1-23 should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of the patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Dated: 4/28/05

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